

Application No.: 09/727,855  
Amendment Dated: September 24, 2004  
Reply to Interview of: September 16, 2004

**REMARKS**

The undersigned attorney wishes to thank the Examiner for the courtesies extended during the Interview. During the Interview, the Examiner recommended several claim amendments, which would place the application in condition for allowance.

Claims 2, 9, 11, 15-17, 19-35, 37, 38, and 40-43 have been cancelled, without prejudice.

As requested by the Examiner, claims 1 and 8 have been amended to recite that the recombinant organism belongs —to the kingdom of *Monera*, *Protista* or *Fungi*—. Support for this amendment is found in original claims 2 and 9, respectively, and in the specification at, for example, pg. 3, ¶ [0006]. See, *In re Gardner*, 177 USPQ 396, 397 (CCPA 1973) and MPEP §§608.01(o) and (l).

As requested by the Examiner and for the sake of clarity, claims 1, 7, 8, 12, 18, 36, and 39 have been amended to remove the recitation that the "polynucleotide," "DNA" or "gene" encodes an "active oxygen species quenching factor."<sup>1</sup>

As requested by the Examiner, claim 1 has further been amended to remove the recitation of SEQ ID NOs: 2, 3, 6, and 8. Support for this amendment is found in original claim 1 and in the specification at, for example, pp. 4-5, ¶¶ [0011]-[0012]. *Id.*

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We note, however, that the recited polynucleotide "encodes a polypeptide having mitochondrial superoxide dismutase (SOD) activity" and that SOD is an active oxygen species quenching factor.

Application No.: 09/727,855  
Amendment Dated: September 24, 2004  
Reply to Interview of: September 16, 2004

As requested by the Examiner and for the sake of clarity, claim 1 has further been amended to move the term "recombinant" from in front of the term "carotenoid" to in front of the term "organism," to insert the term --is-- in front of the term "selected," to remove a superfluous colon and semicolon, to replace the term "or" between the numbers "1" and "4" and after the number "4" with the term --and--, to replace the terms "polynucleotides" and "hybridize" with the terms --a polynucleotide-- and --hybridizes--, to insert a comma after the term "conditions," and to replace "the hybridizing polynucleotides encode" with --said polynucleotide encodes--. It is respectfully submitted that all of these amendments are formal in nature and that none of them change the scope of the claims in any manner.

As requested by the Examiner, claims 8, 18, and 36 have further been amended to recite that the polynucleotide is SEQ ID NOs: 1 or 4 or a polynucleotide that hybridizes under high stringency conditions to the complement of SEQ ID NOs: 1 or 4, wherein the polynucleotide encodes a polypeptide having mitochondrial SOD activity. Support for this amendment is found in original claims 11, 26, and 37, respectively, and in the specification at, for example, pp. 4-5, ¶¶ [0011]-[0012]. *Id.*

As requested by the Examiner and for the sake of consistency, claim 10 has been amended to depend from claim 8. Support for this amendment is found in original claims 9 and 10. *Id.*

As requested by the Examiner, claim 12 has further been amended to recite that the disruption cassette is for disrupting a polynucleotide that is SEQ ID NOs: 1 or 4 or a polynucleotide that hybridizes under high stringency conditions to the

Application No.: 09/727,855  
Amendment Dated: September 24, 2004  
Reply to Interview of: September 16, 2004

complement of SEQ ID NOs: 1 or 4 and that encodes a polypeptide having mitochondrial SOD activity, and that the disruption cassette comprises, in addition to a selectable marker, a fragment of the polynucleotide. Support for this amendment is found in original claim 16, and in the specification at, for example, pg. 9, ¶¶ [0026]-[0027], and pp. 13-14, ¶¶ [0038]-[0039]. *Id.*

As requested by the Examiner, claim 39 has further been amended to depend from claim 1 instead of claim 38. Support for this amendment is found in original claims 38 and 39. *Id.*

Claims 44-56 have been added. Support for these claims is found in original claims 7, 26, and 37, and in the specification at, for example, pg. 4, ¶ [0011] and pp. 7-8, ¶ [0021]. *Id.*

Claim 57 has been added. Support for this claim is found in the specification at, for example, pg. 9, ¶¶ [0026]-[0027] and pp. 13-14, ¶¶ [0038]-[0039].

Claims 58-61 have been added. Support for these claims is found in original claims 7, 26, and 37, and in the specification at, for example, pg. 4, ¶ [0011], pp. 7-8, ¶ [0021], pg. 9, ¶ [0027], and pp. 12-13, ¶ [0034]. *Id.*

Claim 62 has been added. Support for this claim is found in original claims 1 and 7, and in the specification at, for example, pp. 4-5, ¶¶ [0011]-[0012] and pg. 9, ¶ [0028]. *Id.*

Claim 63 has been added. Support for this claim is found in original claim 8, and in the specification at, for example, pp. 4-5, ¶¶ [0011]-[0012] and pg. 9, ¶ [0028]. *Id.*

Amendment Dated:  
Reply to Interview of:

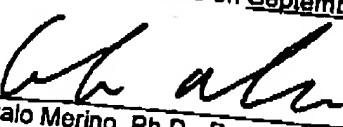
09/27,855  
September 24, 2004  
September 16, 2004

Claim 64 has been added. Support for this claim is found in original claims 12 and 15, and in the specification at, for example, pp. 4-5, ¶¶ [0011]-[0012] and pg. 9, ¶ [0028]. *Id.*

It is submitted that no new matter has been introduced by the foregoing claims and amendments. Approval and entry of the claims and amendments respectfully is requested.

In view of the agreement reached with the Examiner at the interview conducted on September 16, 2004, favorable action on the merits, including entry of the amendments and allowance of all the claims, respectfully are requested. If the Examiner has any questions regarding this paper, please contact the undersigned attorney.

I hereby certify that this correspondence is being transmitted to the U.S. Patent Office via facsimile transmission ((571) 273-0934) and addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450, Attention: Examiner Nashed on September 24, 2004.

  
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Respectfully submitted,

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